

1. A method for transferring data in a network processing device, comprising:

reading a current entry in a receive memory;

identifying a time slot period for receiving the data according to the current entry in

10 the receive memory;

identifying a current receive channel register in the network processing device to write
the received data according to the current entry in the receive memory;

receiving data for the identified time slot period into the identified current receive
channel register;

15 moving the current entry to a next entry in the receive memory when the time slot
period expires;

identifying a next time slot period and a next receive channel register according to the
next entry in the receive memory; and

20 receiving data into the identified next receive channel register for the identified next
time slot period.

2. A method according to claim 1 including moving to a beginning entry in the
receive memory when a last entry is identified in the receive memory and the time slot period
expires.

3. A method according to claim 2 including waiting for a next synchronization
pulse before shifting data into the receive channel register associated with the beginning
entry.

4. A method according to claim 1 including moving to a beginning entry in the
receive memory whenever a synchronization pulse is detected.

5. A method according to claim 1 including:

35 reading a current entry in a transmit memory;

5 identifying a time slot period for transmitting the data according to the current entry in
the transmit memory;
identifying a current transmit channel register in the network processing device
according to the current entry in the transmit memory;
transmitting data for the identified time slot period out from the identified current
10 transmit channel register;
moving to a next entry in the transmit memory when the time slot period expires;
identifying a next time slot period and a next transmit channel register according to
the next entry in the transmit memory; and
transmitting data out from the identified next transmit channel register for the
15 identified next time slot period.

6. A method according to claim 5 including moving to a beginning entry in the
transmit memory when a last entry is identified in the transmit memory and the time slot
period expires.

7. A method according to claim 6 including waiting for a next synchronization
pulse before writing data into the transmit channel register identified by the beginning entry.

8. A method according to claim 5 including moving to a beginning entry in the
transmit memory whenever a synchronization pulse is detected.

9. A method according to claim 5 including loading different entries into the
receive memory and transmit memory according a TDM data stream format used for
transmitting and receiving the data.

10. A method according to claim 5 including reading the receive memory and
receiving data into the receive channel registers and reading the transmit memory and
transmitting data out from the transmit channel registers at the same.

11. A system for transferring data in a network processing device, comprising:

5 means for reading a current entry in a receive memory;
means for identifying a time slot period for receiving the data according to the current
entry in the receive memory;
means for identifying a current receive channel register in the network processing
device to write the received data according to the current entry in the receive memory;
10 means for receiving data for the identified time slot period into the identified current
receive channel register;
means for moving the current entry to a next entry in the receive memory when the
time slot period expires;
means for identifying a next time slot period and a next receive channel register
15 according to the next entry in the receive memory; and
means for receiving data into the identified next receive channel register for the
identified next time slot period.

20 12. A system according to claim 11 including means for moving to a beginning
entry in the receive memory when a last entry is identified in the receive memory and the time
slot period expires.

25 13. A system according to claim 11 including means for waiting for a next
synchronization pulse before shifting data into the receive channel register associated with the
beginning entry.

14. A system according to claim 11 including means for moving to a beginning
entry in the receive memory whenever a synchronization pulse is detected.

30 15. A system according to claim 11 including:
means for reading a current entry in a transmit memory;
means for identifying a time slot period for transmitting the data according to the
current entry in the transmit memory;
means for identifying a current transmit channel register in the network processing
35 device according to the current entry in the transmit memory;

5 means for transmitting data for the identified time slot period out from the identified
current transmit channel register;
means for moving to a next entry in the transmit memory when the time slot period
expires;
means for identifying a next time slot period and transmit channel register according
10 to the next entry in the transmit memory; and
means for transmitting data out from the identified next transmit channel register for
the identified next time slot period.

15 16. A system according to claim 15 including means for moving to a beginning
entry in the transmit memory when a last entry is identified in the transmit memory and the
time slot period expires.

20 17. A system according to claim 16 including means for waiting for a
synchronization pulse before writing data into the transmit channel register identified by the
beginning entry.

25 18. A system according to claim 15 including means for moving to a beginning
entry in the transmit memory whenever a synchronization pulse is detected.

19. A system according to claim 15 including means for loading different entries
into the receive memory and transmit memory according a TDM data stream format used for
transmitting and receiving the data.

30 20. A system according to claim 15 including means for reading the receive
memory and receiving data into the receive channel registers and reading the transmit
memory and transmitting data out from the transmit channel registers at the same.

35 21. A computer readable medium for storing software for transferring data in a
network processing device, comprising:
code for reading a current entry in a receive memory;

5 code for identifying a time slot period for receiving the data according to the current
entry in the receive memory;
code for identifying a current receive channel register in the network processing
device to write the received data according to the current entry in the receive memory;
code for receiving data for the identified time slot period into the identified current
10 receive channel register;
code for moving the current entry to a next entry in the receive memory when the time
slot period expires;
code for identifying a next time slot period and a next receive channel register
according to the next entry in the receive memory; and
15 code for receiving data into the identified next receive channel register for the
identified next time slot period.

20 22. A computer readable medium according to claim 21 including code for
moving to a beginning entry in the receive memory when a last entry is identified in the
receive memory and the time slot period expires.

25 23. A computer readable medium according to claim 21 including code for waiting
for a next synchronization pulse before shifting data into the receive channel register
associated with the beginning entry.

24. A computer readable medium according to claim 21 including code for
moving to a beginning entry in the receive memory whenever a synchronization pulse is
detected.

30 25. A computer readable medium according to claim 21 including:
code for reading a current entry in a transmit memory;
code for identifying a time slot period for transmitting the data according to the
current entry in the transmit memory;
code for identifying a current transmit channel register in the network processing
35 device according to the current entry in the transmit memory;

5 code for transmitting data for the identified time slot period out from the identified
current transmit channel register;
 code for moving to a next entry in the transmit memory when the time slot period
expires;
 code for identifying a next time slot period and transmit channel register according to
10 the next entry in the transmit memory; and
 code for transmitting data out from the identified next transmit channel register for
the identified next time slot period.

26. A computer readable medium according to claim 25 including code for
15 moving to a beginning entry in the transmit memory when a last entry is identified in the
transmit memory and the time slot period expires.

27. A computer readable medium according to claim 26 including code for waiting
20 for a synchronization pulse before writing data into the transmit channel register identified by
the beginning entry.

28. A computer readable medium according to claim 25 including code for
25 moving to a beginning entry in the transmit memory whenever a synchronization pulse is
detected.

29. A computer readable medium according to claim 25 including code for loading
different entries into the receive memory and transmit memory according a TDM data stream
format used for transmitting and receiving the data.

30. A computer readable medium according to claim 25 including code for reading
30 the receive memory and receiving data into the receive channel registers and reading the
transmit memory and transmitting data out from the transmit channel registers at the same.